WHAT IS CLAIMED IS:

1. An image processing apparatus, comprising:

synthesis means for synthesizing image data of a plurality of images obtained by taking a same scene under different exposure conditions to generate synthesized image data of a composite image; and

image processing means for subjecting the synthesized image data by said synthesis means to dodging processing.

2. The image processing apparatus according to claim 1, wherein synthesis conditions due to said synthesis means are set using at least one of shooting information and the image data of each image to be synthesized.

3. The image processing apparatus according to claim 1, wherein weighting to each image to be synthesized at the time of synthesizing the images is determined in accordance with the image data.

4. The image processing apparatus according to claim 1, wherein said plurality of the images of the same scene are taken by a digital camera.

5. An image processing apparatus, comprising:

selection means for selecting a plurality of optimal images for synthesis among image data of a plurality of images obtained by taking a same scene under different exposure conditions; and

synthesis means for synthesizing the image data of said plurality of the optimal images selected by said selection means to generate synthesized image data of a composite image.

6. An image processing apparatus according to claim 5, further comprising image processing means for subjecting the synthesized image data by said synthesis means to dodging processing.

7. The image processing apparatus according to claim 5, wherein synthesis conditions due to said synthesis means are set using at least one of shooting information and the image data of each image to be synthesized.

8. The image processing apparatus according to claim 5, wherein weighting to each image to be synthesized at the time of synthesizing the images is determined in accordance with the image data.

9. The image processing apparatus according to claim 5, wherein said plurality of the images of the same scene are taken by a digital camera.

10. The image processing apparatus according to claim 5, wherein said selection means selects said plurality of the optimal images for synthesis using at least one of the image data and a shooting time of each image to be synthesized.

11. The image processing apparatus according to claim 10, wherein said shooting shooting time between images is within two seconds.

12. The image processing apparatus according to claim 1, wherein said dodging processing is dynamic range compression processing of said image data wherein an image to be processed is made unsharp thereby forming unsharp image data.

13. The image processing apparatus according to claim 12, wherein a highlight region and a shadow region of said image are independently compressed while maintaining gradation with an intermediate density region.

14. The image processing apparatus according to claim 13, wherein said compression comprises processing said image data before being made unsharp using said unsharp image data.

15. The image processing apparatus according to claim 12, wherein said image is made unsharp by filtering the low frequency components of said image.

16. The image processing apparatus according to claim 5, wherein when images to be synthesized are provided by a user, said image data will not go through said selection means.

17. The image processing apparatus according to claim 10, wherein information regarding shooting time of said image data taken by a digital camera or of image data provided from various recording media is recorded in a header or a tag of an image file in an earlier time and read therefrom in a later time.

18. The image processing apparatus according to claim 10, wherein image data not used for synthesis may be cancelled at the time that image data suitable for synthesis are selected.

19. The image processing apparatus according to claim 1, wherein said synthesis means comprises a dark look up table opposite a light look up table, wherein multipliers and adders are connected to said dark look up table and said light look up table.

20. An image processing apparatus, comprising:

selection means for judging a plurality of images obtained by taking a same scene under different exposure conditions among a plurality of supplied images, and for selecting a plurality of optimal images for synthesis among image data of said plurality of images judged as the same scene; and

synthesis means for synthesizing the image data of said plurality of the optimal images selected by said selection means to generate synthesized image data of a composite image.

21. An image processing apparatus, comprising;

acquiring means for acquiring image data of a plurality of first images to be synthesized that are obtained by taking a single scene under different exposure conditions;

synthesis means for synthesizing said image data of said plurality of first images obtained by said acquiring means to generate synthesized image data of a composite image; and

image processing means for subjecting the synthesized image data of said composite image by said synthesis means to dodging processing,

wherein said synthesis means sets synthesis conditions of image synthesis using said image data of said plurality of first images, and synthesizes said image data of said plurality of first images using said set synthesis conditions.

22. The image processing apparatus according to claim 21, wherein said synthesis means performs said image synthesis after converting said image data of said plurality of first images to subject luminance data of logarithmic scales.

23. The image processing apparatus according to claim 22, wherein said synthesis conditions are shifting amounts of the subject luminance data of respective images from the subject luminance data of one image among said plurality of first images, and

wherein said synthesis means selects pixels without washed-out highlights and dull shadows from the subject luminance data of said one image and said respective images, respectively, determines respective averages of the subject luminance data of sets of the selected pixels, and calculates each difference between each of the determined averages of

said respective images and the determined average of said one image as each of the shifting amounts of the respective images.

24. The image processing apparatus according to claim 21, wherein weighting to each image to be synthesized at the time of the image synthesis is determined in accordance with the image data-of said plurality of first images.

25. The image processing apparatus according to claim 21, wherein said plurality of first images are taken by a digital camera, and said synthesized image data output from said synthesis means or said image processing means includes image data for outputting as a photographic print.

26. The image processing apparatus according to claim 21, wherein said synthesis means comprises:

a memory for storing the image data of said plurality of first images;

converting means for converting said image data of said plurality of first images read out from said memory to subject luminance data of logarithmic scales;

setting means for setting said synthesis conditions as shifting amounts of the subject luminance data of respective images from the subject luminance data of one image among said plurality of first images;

a first adder for adding the set shifting amounts to the subject luminance data of said respective images, respectively;

a multiplier for performing weighting to the subject luminance data of said one image and the added subject luminance data of said respective images, respectively; and

a second adder for adding the weighted subject luminance data of said one image and the weighted added subject luminance data of said respective images.

27. An image processing apparatus, comprising:

acquiring means for acquiring image data of a plurality of second images obtained by taking a single scene under different exposure conditions;

selection means for selecting a plurality of optimal first images for synthesis among said image data of said plurality of second images obtained by said acquiring means; and

synthesis means for synthesizing image data of said plurality of the optimal first images selected by said selection means to generate synthesized image data of a composite image,

wherein said synthesis means sets synthesis conditions of image synthesis using said image data of said plurality of first images, and synthesizes said image data of said plurality of first images using said set synthesis conditions.

28. The image processing apparatus according to claim 27, further comprising image processing means for subjecting the synthesized image data of the composite image by said synthesis means to dodging processing.

29. The image processing apparatus according to claim 27, wherein said synthesis means comprises:

a memory for storing the image data of said plurality of first images;

converting means for converting said image data of said plurality of first images read out from said memory to subject luminance data of logarithmic scales;

setting means for setting said synthesis conditions as shifting amounts of the subject luminance data of respective images from the subject luminance data of one image among said plurality of first images;

a first adder for adding the set shifting amounts to the subject luminance data of said respective images, respectively;

a multiplier for performing weighting to the subject luminance data of said one image and the added subject luminance data of said respective images, respectively; and

a second adder for adding the weighted subject luminance data of said one image and the weighted added subject luminance data of said respective images.

30. The image processing apparatus according to claim 27, wherein weighting to each image to be synthesized at the time of the image synthesis is determined in accordance with the image data of said plurality of first images.

31. The image processing apparatus according to claim 27, wherein said plurality of first images are taken by a digital camera, and said synthesized image data output from said synthesis means or said image processing means includes image data for outputting as a photographic print.

32. The image processing apparatus according to claim 27, wherein said selection means selects said plurality of optimal first images for synthesis using at least one of shooting time of day and said image data of said plurality of second images.

33. The image processing apparatus according to claim 32, wherein said selection means selects said plurality of optimal first images using said shooting time of day and said image data of said plurality of second images.

34. The image processing apparatus according to claim 33, wherein said selection means judges a plurality of third images obtained by taking a single scene under different exposure conditions using said shooting time of day of said plurality of second images, prepares respective histograms of said plurality of third images using image data of said plurality of third images, and selects said plurality of optimal first images for synthesis using the prepared respective histograms.

35. An image processing apparatus, comprising:

acquiring means for acquiring image data of a plurality of first images to be synthesized that are obtained by taking a single scene under different exposure conditions;

synthesis means for synthesizing said image data of said plurality of first images obtained by said acquiring means to generate synthesized image data of a composite image; and

image processing means for subjecting the synthesized image data of said composite image by said synthesis means to dodging processing,

wherein said synthesis means sets synthesis conditions of image synthesis using shutter speeds and aperture sizes of a stop of a camera at the time of taking said plurality of first images among shooting information of said plurality of first images, and synthesizes said image data of said plurality of first images using said set synthesis conditions, and

wherein said synthesis means

performs said image synthesis after converting said image data of said plurality of first images to subject luminance data of logarithmic scales,

sets said synthesis conditions as shifting amounts of the subject luminance data of respective images from the subject luminance data of one image among said plurality of first images, as well as,

determines logarithmic values of the shutter speeds and the aperture sizes of the stop when said one image and said respective images were taken respectively, calculates each first difference between each of the determined logarithmic values of the shutter speeds when said respective images were taken and each of the determined logarithmic values of the shutter speeds when said one image was taken, and each second difference between each of the determined logarithmic values of the aperture sizes of the stop when said respective images were taken and each of the determined logarithmic values of the aperture sizes of the stop when said one image was taken, and adds said each first difference and said each second difference for said respective images to calculate the shifting amounts of the respective images.

36. The image processing apparatus according to claim 35, wherein weighting to each image to be synthesized at the time of the image synthesis is determined in accordance with the image data of said plurality of first images.

37. The image processing apparatus according to claim 35, wherein said plurality of first images are taken by a digital camera, and said synthesized image data output from said synthesis means or said image processing means includes image data for outputting as a photographic print.

38. The image processing apparatus according to claim 35, wherein said synthesis means comprises:

a memory for storing the image data of said plurality of first images;

converting means for converting said image data of said plurality of first images read out from said memory to subject luminance data of logarithmic scales;

setting means for setting said synthesis conditions as shifting amounts of the subject luminance data of respective images from the subject luminance data of one image among said plurality of first images;

a first adder for adding the set shifting amounts to

the subject luminance data of said respective images, respectively;

a multiplier for performing weighting to the subject luminance data of said one image and the added subject luminance data of said respective images, respectively; and

a second adder for adding the weighted subject luminance data of said one image and the weighted added subject luminance data of said respective images.

39. An image processing apparatus, comprising:

acquiring means for acquiring image data of a plurality of second images obtained by taking a single scene under different exposure conditions;

selection means for selecting a plurality of optimal first images for synthesis among said plurality of second images obtained by said acquiring means; and

synthesis means for synthesizing image data of said plurality of the optimal first images selected by said selection means to generate synthesized image data of a composite image,

wherein said synthesis means sets synthesis conditions of image synthesis using shutter speeds and aperture sizes of a stop of a camera at the time of taking said plurality of first images among shooting information of said plurality of first images, and synthesizes said image data of said plurality of first images using said set synthesis conditions, and

wherein said synthesis means

performs said image synthesis after converting said image data of said plurality of first images to subject luminance data of logarithmic scales,

sets said synthesis conditions as shifting amounts of the subject luminance data of respective images from the subject luminance data of one image among said plurality of first images, as well as,

determines logarithmic values of the shutter speeds and the aperture sizes of the stop when said one image and said respective images were taken respectively, calculates each first

difference between each of the determined logarithmic values of the shutter speeds when said respective images were taken and each of the determined logarithmic values of the shutter speeds when said one image was taken, and each second difference between each of the determined logarithmic values of the aperture sizes of the stop when said respective images were taken and each of the determined logarithmic values of the aperture sizes of the stop when said one image was taken, and adds said each first difference and said each second difference for said respective images to calculate the shifting amounts of the respective images.

40. The image processing apparatus according to claim 39, further comprising image processing means for subjecting the synthesized image data of the composite image by said synthesis means to dodging processing.

41. The image processing apparatus according to claim 39, wherein weighting to each image to be synthesized at the time of the image synthesis is determined in accordance with the image data of said plurality of first images.

42. The image processing apparatus according to claim 39, wherein said plurality of first images are taken by a digital camera, and said synthesized image data output from said synthesis means or said image processing means includes image data for outputting as a photographic print.

43. The image processing apparatus according to claim 39, wherein said selection means selects said plurality of optimal first images for synthesis using at least one of shooting time of day and said image data of said plurality of second images.

44. The image processing apparatus according to claim 43, wherein said selection means selects said plurality of optimal first images using said shooting time of day and said image data of said plurality of second images.

45. The image processing apparatus according to claim 44, wherein said selection means judges a plurality of third images obtained by taking a single scene under different exposure conditions using said shooting time of day of said plurality of second images, prepares respective histograms of said plurality of third images using image data of said plurality of third images, and selects said plurality of optimal first images for synthesis using the prepared respective histograms.

46. The image processing apparatus according to claim 39, wherein said synthesis means comprises:

a memory for storing the image data of said plurality of first images;

converting means for converting said image data of said plurality of first images read out from said memory to subject luminance data of logarithmic scales;

setting means for setting said synthesis conditions as shifting amounts of the subject luminance data of respective images from the subject luminance data of one image among said plurality of first images;

a first adder for adding the set shifting amounts to the subject luminance data of said respective images, respectively;

a multiplier for performing weighting to the subject luminance data of said one image and the added subject luminance data of said respective images, respectively; and

a second adder for adding the weighted subject luminance data of said one image and the weighted added subject luminance data of said respective images.